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ABSTRACT

To increase the understanding of help seeking by college students in large classes, this study examined the help-seeking attitudes, intentions, and goals, and the preferred helping resources of 883 college students. Factor analysis suggested that students could be parsimoniously described by two help-seeking orientations: (1) strategic/adaptive, the degree to which students sought instrumental help from teachers rather than peers; and (2) avoidant, the extent that students felt threatened by and avoided seeking help that if obtained would reduce their workload. A person-centered hierarchical cluster analysis indicated that 17% of the students could be classified as strategic/adaptive and 23% described as help-seeking avoidant. Students with higher strategic/adaptive orientation were more anxious, performed more poorly, and used more organizational and metacognitive strategies, but relied less on rehearsal. Help-seeking avoidant orientation was directly related to the level of mastery avoidance and both performance approach and performance avoidance achievement goals. Discussion focuses on suggestions for college students in, and instructors of, large college classes and on implications of the results for help-seeking, self-regulation, and achievement goal theory. Some items from the questionnaire developed for the study are included. (Contains 42 references and 6 tables.) (SLD)

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Seeking Help in Large College Classes: Who, Why, and from Whom?

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Abstract

Many college students fail to seek the assistance needed to overcome academic difficulties, especially in large, relatively impersonal classes. To increase our understanding of students' (N = 883) help seeking in such classes, this study examined their help-seeking attitudes, intentions, goals, and preferred helping resources. Using a variable-centered approach, factor analysis suggested that students could be parsimoniously described by two help-seeking orientations: a) strategic/adaptive—the degree to which students sought instrumental help (e.g., explanations rather than answers) from teachers rather than peers; and b) avoidant—the extent that students felt threatened by and avoided seeking help that if obtained would be to reduce their workload (executive goals). A person-centered hierarchical cluster analysis indicated that 17% of the students could be classified as strategic/adaptive and 23% described as help-seeking avoidant. Students with higher strategic/adaptive-orientation were more motivated, and self-regulating, with higher mastery achievement goals and course grades. Students with higher help-seeking avoidant-orientation were more anxious, performed more poorly, and used more organizational and metacognitive strategies, but relied less on rehearsal. Help-seeking avoidant orientation was directly related to the level of mastery avoidance and both performance approach and performance avoidance achievement goals. Discussion focused on suggestions for college students in, and instructors of, large college classes and on implications of the results for help seeking, self-regulation, and achievement goal theory.

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Seeking Help in Large College Classes: Who, Why, and from Whom?

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There is now considerable evidence that seeking needed assistance is an important strategy of self-regulated learners (e.g., Karabenick, 1998). Most of what we understand about the process and determinants of help seeking is based on experiments and field studies with elementary and middle school students. This includes explicating Nelson-Le Gall's (1981) distinction between instrumental (learning focused) and executive (utilitarian) help-seeking goals, developmental changes in how students construe the benefits and costs of help seeking, including the emergence and role of help-seeking threat, preferred helpers, and the influence of achievement goals (e.g., Arbreton, 1998; Butler & Neuman, 1995; Nelson-Le Gall, 1981, 1985; Newman, 1990, 1994, 1998, 2000; Puustinen, 1998; Ryan & Pintrich, 1997; van der Meij, 1988, 1998). However, there have been relatively few studies of college students, and therefore questions about whether what we know about younger learners in K-12 classes generalizes to higher education settings.

It is especially important to understand more completely help seeking in large classes that remain one of the major venues for college instruction. With hundreds of students, despite smaller recitation sections, such classes are relatively impersonal compared to the ones students have adapted to in high school. Although their size can provide a degree of anonymity that could facilitate help seeking (Karabenick & Knapp, 1988b), such classes can also present both psychological and logistical barriers to students in need of assistance. According to existing evidence, we can conclude that most college students recognize they need help at some time during a typical term but those needing it most are least likely to seek it (Karabenick & Knapp, 1988a), and that college students who are more motivated and strategic learners are more likely to seek instrumental, adaptive help (e.g., Alexitch, 1997; Ames, 1983; Karabenick & Knapp, 1991; Karabenick & Sharma, 1994; Schwalb & Sukemuni, 1998). However, more research is needed that describes not only students' intentions to seek help but the type of help sought, from whom, and how these relate to students' broader motivational and self-regulatory profiles. Toward that end, the present cross-sectional field study was designed to describe help seeking in large college classes using both variable- and person-centered approaches.

Although they differ in some respects, models of the help-seeking process (e.g., Gross & McMullen, 1983; Newman, 1990) and studies of help-seeking determinants, include as components the recognition of need, affect and attitudes toward help seeking, the decision to seek help, help-seeking goals, and preferred sources of help. The present study: a) assessed relationships between components of the help-seeking process; b) determined whether students can be more parsimoniously described by higher-order help-seeking orientations that incorporate more than one component; c) categorized students into statistically discriminable clusters; and d) examined how help seeking orientations and clusters are related to students' motivational tendencies, personal achievement goal orientations, use of learning strategies, and academic performance. The following review of studies of both K-12 and college students examines in greater detail what we can expect for each of these areas from evidence to date.

Relationships Between Help-Seeking Components

Because of the concern with students who do not seek needed help, most studies have focused on its costs, primarily threat to self-esteem and social embarrassment (e.g., Fisher, Nadler, & Whitcher-Alagna, 1982; Karabenick & Knapp, 1991; Newman, 1990; Newman & Schwager, 1993; Shapiro, 1983). There is ample evidence that help-seeking threat is directly related to

avoiding help in adolescents (Newman & Goldin, 1990; Ryan, Hicks & Midgley, 1997; Ryan & Pintrich, 1997). However, it does depend on the purpose of seeking help. In two studies, threat was inversely related to instrumental help seeking among adolescents (Ryan & Pintrich, 1997) and college students (Karabenick & Knapp, 1991). Whereas threat was directly related to executive help seeking among middle school students (Newman & Schwager, 1993), it was unrelated for college students (Karabenick & Knapp, 1991). In studies that focused on threat and preferred help-seeking sources the results are inconsistent. In the Ryan and Pintrich (1997) study, the inverse relationship between threat and instrumental help seeking was found for teachers (formal) but not peers (informal). Conversely, threat was not related to college students' reports of seeking help from formal but was inversely related to help seeking from Informal sources (Karabenick & Knapp, 1991), although reports of actual rather than need-contingent help seeking makes the latter finding more difficult to interpret.

With respect to the remaining relationships between help-seeking components, evidence is especially lacking about the association between help-seeking goals and preferred sources of help among college students, that is, whether learners are more likely to seek out teachers or their peers depending on whether their help-seeking goal is to reduce their workload (executive) or to understand the material (instrumental). Given that teachers have more expertise, which even younger students understand (Newman & Goldin, 1990; Newman & Schwager, 1993; van der Meij, 1988, 1998), it would seem likely that instrumental help seekers would prefer formal sources. Conversely, since executive help seeking entails a reduction in the effort to overcome difficulties (e.g., obtaining the answer to a problem), students who obtain such assistance should prefer informal sources (other students) who are more convenient (see Knapp & Karabenick, 1988). Finally, since instrumental and executive help-seeking goals are conceptually antithetical, we expect an inverse relationship between them.

Help-Seeking Orientations

In addition to associations between components of the help-seeking process, the present study explored whether we can describe college students' help seeking with orientations that combine components. One outcome of such an analysis would be a single dimension (i.e., latent variable or factor) that incorporates all components. Evidence from younger learners suggests that help-seeking threat, avoidance of help, and executive help-seeking goals could coalesce to form a single latent variable. It is unclear from available evidence, however, whether the same factor would also include instrumental help seeking goals and preferred help-seeking target or whether these variables would form a separate dimension. In either case, this analysis would provide a parsimonious way to describe student help seeking in this context.

Students Grouped by Help-Seeking Characteristics

A person-centered, in addition to the variable-center approach discussed thus far, would also help to describe help seeking in large college classes by identifying groups of students with similar help-seeking characteristics. For this purpose, cluster analysis was used as an exploratory technique to determine the number of clusters that would best differentiate groups in a meaningful way. Because there are no studies that have attempted such an analysis predictions would be speculative. As with the variable-centered analysis, however, we would expect groups to differ in the degree of help-seeking threat and intentions to seek help, but which other variables characterized the groups' profiles, or whether additional groups would emerge remained to be determined.

Motivation, Self-Regulation, and Achievement Goals

As with previous research of college students (e.g., Karabenick & Knapp, 1991), this study examined relationships between students' help seeking orientations and cluster memberships and their motivation, affect, and use of cognitive and metacognitive learning strategies. In general, students with more strategic and adaptive help-seeking orientations were expected to be more motivated (higher course-related value, efficacy, and intrinsic interest), have lower negative affect, and report greater use of learning strategies, especially higher-order strategies such as elaboration and metacognition. However, without knowing the dimensionality of the help-seeking components it is not possible to be more specific. Relationships with personal mastery (also called "task" or "learning") and performance (also called "ego" and "ability") achievement goal orientations were addressed both to generalize studies of younger learners to college students and to provide additional evidence concerning revised goal theory, which differentiates between approach and avoidance performance goals (e.g., Church, Elliot & Gable, 2001; Midgley, Kaplan & Middleton, 2001; Pintrich, 2000a, 2000b; Skaalvik, 1997). The present study adopted Pintrich's (2000a, 2000b) two-dimensional framework that added mastery avoidance to the three others proposed by revised achievement goal theory (i.e., mastery approach, performance approach, and performance avoidance).

Evidence from a number of studies of younger learners that differentiated students' help seeking goals (Arbreton, 1993, 1998; Butler & Neuman, 1995; Newman, 1991, 1994; Ryan & Pintrich, 1997; Ryan, Hicks & Midgley, 1998) indicates that mastery (approach) goal orientation is inversely related to help-seeking threat (from teachers but not peers in Ryan & Pintrich, 1997), help-seeking avoidance, and executive help seeking, whereas mastery orientation is directly related to instrumental help seeking. Relative ability goals (and extrinsic goals as well) are directly related to help-seeking threat, help-seeking avoidance, and executive help seeking. In two studies, however, relative ability goal orientation was not related to instrumental help-seeking goals (Arbreton, 1993; Ryan & Pintrich, 1997). With respect to revised goal theory, it is important to note that measures of relative ability goal orientation in the these studies did not deliberately differentiate between approach and avoidance performance goals. However, scale content suggests they are more likely to have assessed performance approach than performance avoidance. Newman (1998) did find relationships between performance approach orientation and instrumental help seeking, but the direction depended on whether learners performed under conditions that stressed learning (direct) or performance (inverse).

Inclusion of the complete taxonomy of achievement goals is important because it can provide more detail concerning the goal profile of college student help seeking. Relationships with help seeking can also provide evidence that bears on achievement goals, especially concerning the distinction between approach and avoidance mastery and performance goals. Based on research to date we can expect college students with higher mastery approach goal orientations to have lower levels of help seeking threat, avoidance, and executive help seeking goals, and stronger instrumental help seeking goals. We also expect that performance approach and avoidance goals would be directly related to help-seeking threat, avoidance, and executive help seeking, with the relationships even stronger for performance avoidance goals.

Although there is no evidence upon which to base predictions for mastery avoidance goals, its focus on avoidance may result in relationships that are similar to performance goals. No relationship is expected between relative ability or mastery avoidant goals, and instrumental help seeking. Also, there is little basis for predictions concerning achievement goals and preferred helper (teachers versus peers). However, if as above we expect a relationship between instrumental help-seeking goals and formal help seeking, then students with mastery goals should

prefer formal targets, although it is unclear whether and in what manner performance goals will relate to target preference.

Assessment of Components

An important feature of the present study was the assessment of components of help seeking in ways that are conceptually independent. For example, just as it is necessary to control for the need for assistance when measuring students' tendencies to seek help (Karabenick & Knapp, 1991; Newman, 1990), to whom students turn for assistance was determined controlling for the tendency to seek help. The present study measured help-seeking intentions by its inverse—the avoidance of help seeking. Avoidance was used to assess intentions independent of the type of help (goals and targets) that students would seek if they were to do so. Instrumental and executive help-seeking goals, as well as preferred help-seeking sources (formal or informal) were also assessed in a way that maintained their conceptual independence.

Method

Participants and Assessment Procedure

Participants were students in one of six large undergraduate chemistry classes at a large, Midwestern university. Three were introductory chemistry classes with enrollments of 450, 404, and 229 students; and three were organic chemistry classes with enrollments of 358, 343, and 255. In addition to lectures, students participated in smaller recitation sections. Participation was voluntary, with students granting researchers access to their test performance. Data were collected in three waves: weeks two, six, and 12. The present study used data from the second assessment (N = 883; 51% female, *Mean* age = 20.4), which occurred at mid-term, just prior to the second of three exams. The assessment session was conducted in class by graduate assistants and required approximately 15 minutes. Participants were relatively high in academic ability and achievement, with mean SAT math scores of 677 and verbal of 634, or mean ACT math and verbal scores of 30 and 29, respectively. Students also had mean high school GPA's of 3.87 and mean college GPA's of 3.34.

Questionnaire and Scales

The 107-item questionnaire used a 5-point (1 to 5) response scale that was anchored with the statements "not at all true" and "completely true." Based on the Motivated Strategies for Learning Questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1993), 60 items (examples appended) measured motivation (self-efficacy, value, intrinsic interest, anxiety), anxiety, and achievement goals. Self-efficacy refers to students' beliefs that they can master the course material. Value combines liking, utility value, and the importance of the course. Intrinsic interest assesses students' interest in the course material, whereas anxiety combines worry and physiological responsivity. Goal orientation consisted of mastery and performance, approach and avoidance achievement goal orientations, which included the recently proposed mastery avoidance goal (Pintrich, 2000a, 2000b).

Forty-seven items assessed students' self-reported use of cognitive (rehearsal, organization, elaboration) and metacognitive strategies, which included planning, monitoring, and regulation. Sample items from these scales are appended. There were five help-seeking scales: instrumental/adaptive help-seeking goal, formal vs. informal help-seeking target, help-seeking threat, avoidance of help seeking, and executive help-seeking goal. Items for these scales are also

appended, and descriptive statistics for all scales are shown in Table 1, including the number of items and Cronbach alpha internal consistency estimates, which are all in the acceptable range.

Table 1. Scale Descriptive Statistics

Scale	Items	Mean	SD	Alpha
Motivation & Affect				
Self-Efficacy	7	3.4	.9	.93
Task Value	5	3.5	.8	.85
Intrinsic Interest	5	2.8	.8	.84
Course-Related Anxiety	7	2.5	.9	.88
Achievement Goal Orientation				
Mastery Approach	6	3.3	.8	.84
Mastery Avoidance	7	2.9	.9	.82
Performance Approach	10	2.9	.9	.94
Performance Avoidance	5	2.1	.9	.89
Regulation/Strategies				
Rehearsal	3	3.4	.7	.72
Organization	5	2.8	.6	.83
Elaboration	3	3.7	.7	.79
Metacognition	12	3.0	.5	.75
Help Seeking				
Instrumental HS	2	3.5	.9	.62
Target (Formal HS)	3	2.8	.9	.66
HS Threat	3	1.8	.9	.81
HS Avoidance	3	1.7	.8	.77
Executive HS	2	1.8	.9	.78

Results

Relationships Between Help-Seeking Components

Table 2, which presents correlations between the help-seeking components, shows the expected direct relation between help-seeking threat and help-seeking avoidance. However, there are clear differences in the type of help sought as a function of threat. For these college students, threat was directly related to executive help seeking and inversely related to instrumental help seeking. In other words, more highly threatened students were less likely to seek needed help. However, if they did seek help, more threatened students indicated that it would be for expedient purposes and less to understand the course material. Another clear pattern emerges with respect to the help-seeking target: help-seeking threat, avoidance, and executive help seeking are not related to whether students preferred to seek help from their teachers versus from other students. Formality of help-seeking target, however, is related to instrumental help seeking. Specifically, the more

that students indicated they would seek help to understand the material, the more likely it would be from their teachers rather than from other students.

Table 2. Correlations Between Help-Seeking Components

Component	HS Threat	HS Avoidance	Executive HS	Instrumental HS
HS Avoidance	.69*			
Executive HS	.52*	.54*		
Instrumental HS	-.26*	-.39*	-.16*	
Target (Formal HS)	.05	.00	.01	.17*

*$p < .001$

Help-Seeking Orientations

The high correlations between threat, avoidance, and executive help seeking, their relative independence from help-seeking target, and the association between instrumental help seeking and formal target preference suggests the possibility that distinct latent variables would emerge, even though the threat/avoidance/executive grouping is inversely related to instrumental help seeking. The five help-seeking components were factor analyzed to determine whether they defined higher-order orientations suggested by the correlational patterns shown in Table 2. The results of a principal components analysis and varimax rotation based on these variables are shown in Table 3. Two latent variables with Eigenvalues greater than 1 were extracted, which accounted for 69% of the variance. Factor loadings greater than .50 clearly differentiated the two orientations. What is termed "help-seeking avoidance orientation" combines the threat posed by help seeking, its avoidance, and utilitarian help sought to reduce one's workload. The second orientation, termed "strategic/adaptive help seeking" combines instrumental help-seeking goals with help obtained from formal (e.g., instructors) rather than informal sources (e.g., other students). For subsequent analysis, avoidant and strategic/adaptive help-seeking orientation scales were constructed by unit weighting their constituent scales, which is justified given their approximately equal variances, as shown in Table 1.

Table 3. Results of Factor Analysis of Help-Seeking Components

Help-Seeking (HS) Component		Orientation	
		Avoidant	Strategic/ Adaptive
	Eigenvalue	2.4	1.1
	%	47.2	21.8
HS Threat		.87	
HS Avoidance		.88	
Executive HS		.76	
Instrumental HS			.60
Target (Formal HS)			.87

Motivational and Strategic Correlates of Help-Seeking Orientations

Correlations with the derived help-seeking orientations, shown in Table 4, describe their association with other attributes of motivation, self-regulated learning, and achievement goals. The profiles of relationships are decidedly distinct. Students with stronger strategic/adaptive orientations believed themselves more efficacious, considered the course more valuable, and were more interested in the course material. They were also more likely to have a higher mastery approach goal orientation and indicated having used more learning strategies, especially rehearsal and metacognition. Students with higher help-seeking avoidant orientations had higher course-related anxiety, mastery avoidance, performance approach and avoidance goals orientations, and were more likely to use organization and metacognition as learning strategies, but less likely to use rehearsal. In addition, course performance is directly related to strategic/adaptive and inversely related to avoidant help-seeking orientations, respectively.

Table 4. Relationships Between Motivation, Affect, Goal Orientations, Learning Strategies, Performance, and Help-Seeking Orientations

Scale	Help-Seeking Orientation	
	Strat./Adap.	Avoidant
Motivation & Affect		
Self-Efficacy	.24*	-.08
Task Value	.36*	-.11
Intrinsic Interest	.32*	.05
Course-Related Anxiety	-.03	.26*
Achievement Goal Orientation		
Mastery Approach	.31*	-.05
Mastery Avoidance	.03	.26*
Performance Approach	.08	.31*
Performance Avoidance	-.04	.50*
Regulation/Strategies		
Rehearsal	.38*	-.12*
Organization	.15*	.36*
Elaboration	.18*	.08
Metacognition	.36*	.13*
Performance		
Exam %	.14*	-.17*

*$p < .001$

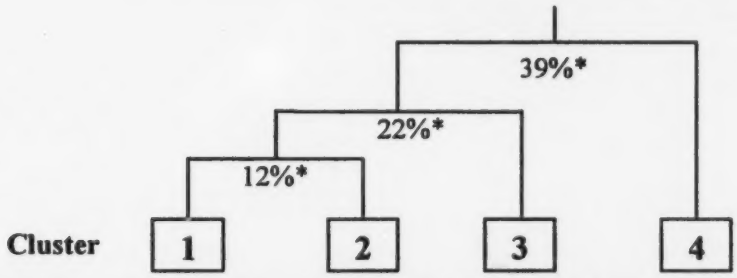
Student Help-Seeking Clusters

A hierarchical cluster analysis was used to identify students with similar help-seeking characteristics, based on the five help-seeking dimensions assessed, using Wards method and squared Euclidean distances. As shown in the dendogram in Table 5, there was a 12% increase in the agglomeration coefficient from four to three clusters, a 22% change from three to two clusters, and a 39% change from two to one. Although a three or even two cluster solution would be suggested by these changes, inspection of the means indicated that conceptually meaningful information was best revealed by the four cluster solution, which differentiated Clusters 1 and 2. (It should be noted that a very similar solution emerged when using a K-Means non-hierarchical procedure.) To aid in characterizing the clusters, univariate ANOVAs and post-hoc tests (Tukey-b) were computed using a relatively conservative alpha level of .001. Means with non-common superscripts in a given row are statistically different.

The profile of means for students in Cluster 1 indicates they were relatively high in instrumental help seeking from formal sources and low in threat, avoidance, and executive help seeking. This pattern suggests that 17% of the students can be classified as strategic/adaptive help seekers. Cluster 2 contains students that are very similar to those in Cluster 1, with the exception that they were less likely to seek help from teachers and more likely from other students to the same extent

that were students in Clusters 3 and 4. Cluster 3 students are lower in strategic/adaptive and formal help seeking, but indicate being somewhat threatened, and higher in help-seeking avoidance, which they would seek to decrease their workload. Although higher than Cluster 3 in strategic/adaptive and formal HS, the significantly higher level of help-seeking threat, avoidance, and executive goals clearly distinguishes Cluster 4 from all other clusters. The overall profile thus suggests identifying 23% of the students in these chemistry classes as highly avoidant. An alternative way to describe differences between the clusters is by their levels of strategic/adaptive and avoidant help-seeking orientations. The mean orientation scores are plotted in Figure 1, which clearly shows how Cluster 4 differs in the level of avoidance compared to the other clusters, as well as the high strategic/adaptive levels of Cluster 1.

Table 5. Dendogram and Characteristics of Help-Seeking Clusters



N (%)	146 (17)	222 (25)	314 (36)	201 (23)	$F_{(3,879)}$
Help Seeking (HS) Components					
Instrumental HS	4.1^a	4.3^a	2.9^b	3.3^c	203.44
Target (Formal)	4.0^a	2.5^b	2.4^b	2.9^c	216.14
HS Threat	1.3^a	1.2^a	1.6^b	3.0^c	537.09
HS Avoid	1.3^a	1.2^a	1.8^b	2.7^c	314.00
Executive HS	1.3^a	1.5^b	1.6^b	2.8^c	189.35

* = Percent increase in agglomeration clustering coefficient.

Non-common superscripts indicate means that are statistically different based on post-hoc Tukey-b tests at $p < .001$. Cluster analysis used Wards method and squared Euclidean distances.

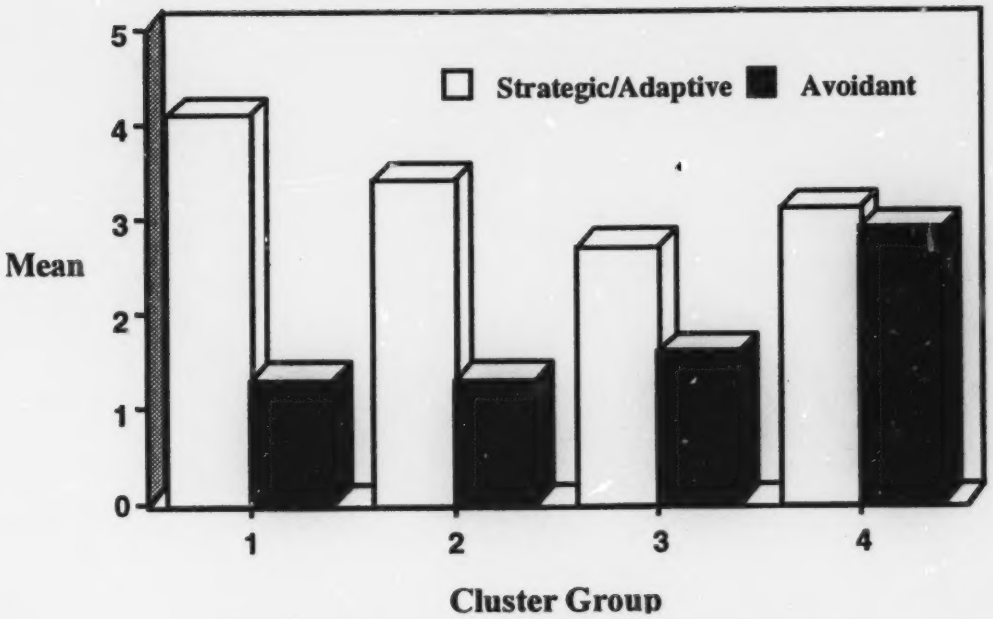


Figure 1. Levels of Strategic/Adaptive and Avoidant Help-Seeking Orientations for the Four Student Clusters

Table 6. Cluster Levels of Motivation, Affect, Goal Orientations, Learning Strategies, and Performance

Scale	Cluster				$F_{3,787}$
	1	2	3	4	
Motivation & Affect					
Self-Efficacy	3.6^{a}	3.5^{ab}	3.2^{b}	3.3^{ab}	9.27
Task Value	3.8^{a}	3.7^{a}	3.3^{b}	3.4^{b}	22.98
Intrinsic Interest	3.0^{a}	2.9^{a}	2.5^{b}	2.9^{a}	16.50
Course-Related Anxiety	2.2^{a}	2.3^{a}	2.4^{a}	3.0^{b}	35.02
Achievement Goal Orientation					
Mastery Approach	3.4^{a}	3.4^{a}	3.1^{b}	3.3^{ab}	13.51
Mastery Avoidance	2.9^{a}	2.8^{a}	2.8^{a}	3.3^{b}	11.39
Performance Approach	2.9^{a}	2.8^{a}	2.7^{a}	3.4^{b}	24.65
Performance Avoidance	1.8^{a}	1.9^{a}	2.0^{a}	2.9^{b}	73.58
Regulation/Strategies					
Rehearsal	3.7^{a}	3.6^{a}	3.2^{b}	3.4^{b}	25.91
Organization	2.7^{a}	2.6^{a}	2.6^{a}	3.1^{b}	22.85
Elaboration	3.9^{a}	3.7^{ab}	3.6^{b}	3.8^{ab}	6.97
Metacognition	3.1^{a}	3.1^{a}	2.8^{b}	3.2^{a}	27.41
Performance					
Exam %	74.5^{a}	72.3^{a}	69.9^{ab}	64.9^{b}	13.06

Note: All F-ratios are significant at $p < .001$. Non-common superscripts indicate means that are statistically different based on post-hoc Tukey-b tests at $p < .001$.

Cluster Patterns of Motivation, Learning Strategies, and Performance

Table 6 presents the mean motivational, affect, goal-orientation, strategy use, and performance levels for the four clusters. As with the help-seeking components, ANOVAs were computed, followed by post-hoc Tukey-b tests with alpha = .001. Means with non-common subscripts within a given row are statistically significant. Consistent with their help-seeking orientations, both students in Clusters 1 and 2 manifest characteristics of self-regulated learners. That is, they are high in self-efficacy, task value, and intrinsic interest, low in course-related anxiety, have a high mastery orientation, employ higher level (i.e., elaboration, metacognition) as well as lower level strategies (rehearsal), and perform at a high level.

With the exception of anxiety, students in Cluster 3 have statistically lower levels on these variables than do students in Clusters 1 and 2; they also performed at a significantly lower level. As with the help-seeking components, students in Cluster 4 are in some respects similar to those in Clusters 1 and 2. That is, they have similar levels of self-efficacy, task value, intrinsic interest, and use of elaboration and metacognitive strategies. As would be suggested by their high help-seeking avoidance orientation, Cluster 4 students differ, however, on variables related to anxiety, threat, or in ways that involve interpersonal comparisons. Specifically, they are higher in course-related anxiety, mastery and performance avoidance orientations, and performance approach orientation. Cluster 4 students also had the lowest performance level. Interestingly, these students were also relatively high in their use of organizational strategies.

Discussion

This study was designed to describe students' help seeking in large college classes by assessing components of the help seeking process and their relation to course-related motivation, self-regulation, and performance. Analyses identified two help-seeking orientations among students in these classes, which are consistent with the results of previous studies (e.g., Arbreton, 1998; Karabenick & Knapp, 1991; Newman, 2000; Ryan & Pintrich, 1997). In general, students with higher strategic/adaptive help-seeking orientations, who were more likely to seek instrumental help from formal (e.g., instructors) than from informal sources (e.g., other students), were more motivated (higher self-efficacy, value, intrinsic motivation), more mastery goal oriented, more likely to use cognitive and metacognitive strategies, and performed better in the course.

Students with higher avoidant help-seeking orientation, by contrast, were highly threatened by help seeking, more likely to avoid doing so, and sought help to avoid work. However, there was no evidence to link this orientation with the preferred source of help; that is, the same degree of threat accompanied the prospect of seeking assistance from teachers as from other students. Students higher in help-seeking avoidance orientation were also more anxious about poor performance, and had stronger mastery avoidance goals and performance goals (approach and avoidance). Yet, even students with higher avoidance orientation were more likely to use cognitive and metacognitive strategies, with the exception of less use of rehearsal. They also did not perform as well as did students with lower help-seeking avoidance orientations.

In addition to identifying distinct help-seeking orientations, four distinct groups of students were statistically classified. The most clearly identified group was both highly strategic/adaptive and low in avoidance orientation. This group had high performance levels, was highly motivated, self-regulating, and reported having high mastery approach achievement goals. This pattern comes the closest to Newman's (1990, 1998, 2000) characterization of the adaptive help seeker: knowing that help is needed (i.e., highly metacognitive), seeking help when necessary to overcome the difficulty (instrumental), and targeting high quality sources of assistance. Such students can also be described as highly self-regulated, as making the most of available social resources to accomplish their learning goals. A second group of students, which we could label strategic/adaptive informal, had virtually the same help-seeking profile with the exception of being much more likely to ask other students for help rather than their instructors and somewhat more likely to seek help to avoid work.

A third cluster was composed of students with considerably lower strategic/adaptive help-seeking orientations and slightly higher avoidance orientations. They had the lowest levels of self-efficacy, task value, intrinsic interest, and mastery goal orientation; they also reported the lowest use of cognitive and metacognitive strategies. The combination of lower motivation and strategy use suggests characterizing these students as relatively non-strategic/non-adaptive and relatively disengaged, which was reflected in their somewhat lower performance in the course.

Because of students' markedly higher levels of help-seeking threat, avoidance, and executive help-seeking goals, the fourth cluster can be characterized as avoidant. This characterization is also suggested both by their significantly higher course-related anxiety and high levels of both mastery and performance avoidance, as well as comparatively poor performance. Students in this group, however, also had relatively high approach as well as avoidant achievement goal orientations, which underscores their ego-related focus on relative ability comparisons with other students in the course. These students are thus threatened in many ways: not performing well, not being able to master the course material, and generally threatened by interpersonal ability

comparisons. Yet, unlike the strategic/adaptive student cluster, which was low in help-seeking avoidance, this group does not have the lowest, but rather a moderately high strategic/adaptive help-seeking orientation, as well as moderately high levels of motivation and strategy use (especially organization). In other words, it suggests a more complex and conflicted or ambivalent help-seeking pattern: highly threatened, avoidant, and executive but also somewhat strategic/adaptive.

Contrasting the latter two student clusters (3 and 4) raises the question, contingent on replication in similar classes and generalization to other subject areas, about whether high threat and avoidance are somehow linked to students having at least a moderately high strategic/adaptive help-seeking orientation. That is, threat and avoidance may not be sufficiently salient, or mindful, without students having reached some threshold level at which seeking help is considered an option. Students who are relatively disengaged, such as those in Cluster 3, may not have been as threatened because help seeking was just not likely. Subsequent studies that probe this contingency in greater detail would be required to more completely examine this issue.

The pattern of relationships between help-seeking orientations, student clusters, and students' achievement goals provides additional insight into the nature of help seeking in these classes. Students' mastery goal orientation is related to strategic/adaptive help seeking but not to avoidant help-seeking orientations. Thus students who are generally focused on learning the material, even if it means occasional failure, are more likely to seek help from formal sources, independent of how threatened they are by help seeking, avoid it, or seek help to avoid work. Conversely, avoidance help-seeking orientation is related to performance approach and both mastery avoidance and performance avoidance goals, but not to students' level of mastery goal orientation.

The relationships between students' avoidant help-seeking orientation and performance goals suggests that students who are concerned about their ability relative to their peers, whether the emphasis is on outperforming them (approach) or worried about being less able (avoidance), are threatened by and avoid seeking help and do so to minimize effort. In other words, students with higher help-seeking avoidant orientation are generally concerned about how they compare to others. The fact that both performance approach and performance avoidance achievement goals are related in the same way to help-seeking can be interpreted as support for normative rather than revised achievement goal theory (Midgley, et al., 2001). The same help-seeking pattern holds for students who are mastery avoidant, that is, more concerned about not being able to master the course material; they too are threatened by and avoid seeking help, and do so not to master the material but to avoid work. Importantly, the clear differences in relationships between help-seeking orientations and approach and avoidance mastery achievement goal orientations provide validation for the revision of goal theory proposed by Pintrich (2000a, 2000b).

Taken together, implications of the results for teaching and help seeking in large (or any other) classes are consistent with, and reinforce, considerable research and theory on self-regulated learning and achievement goals: there should be greater emphasis on mastery goals and a reduced focus on interpersonal comparisons. This change in emphasis would have been especially beneficial for the approximately one-forth of the students in these classes who were high in avoidance help-seeking orientation, the cluster that was significantly higher than all others in concerns about interpersonal comparisons. The other recommendation is to emphasize that help seeking is an important strategy to be used when necessary and responsibly, that is, promoting a strategic/adaptive help-seeking orientation. Apparently, just stating on the course syllabus that an instructor will provide help outside of class can increase students' willingness to seek it (Perrine, Lisle & Tucker, 1995).

It is important to emphasize again how help-seeking components were assessed in the present study when interpreting the results. Rather than asking students whether they sought help, for what purpose and from whom, they were asked what they *would* do. That is, what they would do given the need for help, and if they were to seek help, its purpose and from whom. Whereas this does not provide actual rates of help seeking from particular sources, information obtained in this manner is more informative about the process and does not rely entirely on statistical controls to arrive at the degree of components' independent contributions.

The results raise several questions and provide directions for further research. One question is whether the relationships, help-seeking orientations, and clusters found in the present study of highly motivated and successful students would generalize to large classes with less highly qualified students. Another is whether these results would be found with other subject areas, such as the social sciences or humanities, or courses that do not require as much memorization. Studying other subject areas may shed light on why students who were help-seeking avoidant were more likely to use organizational strategies and less likely to use rehearsal. Further research should also focus on measurement issues. For example, the present study assessed help-seeking resource preferences in opposition to each other (i.e., student versus teacher). It would be important to determine whether intentions to approach teachers and other students for help, assessed independently would have produced similar results. Finally, it would be especially informative to augment structured survey and self-report data with other sources of information. For example, follow-up interviews with students in the four clusters could serve to validate the characterizations of these students that are suggested by the statistical analyses and provide a thicker description of who seeks help, for what reasons, and from whom.

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Sample Items from Motivation, Achievement Goal, and Strategy Scales

Motivation and Affect

Self-Efficacy
I'm confident I can understand the basic concepts taught in this course.

Task Value
I think I will be able to use what I learn in this course in other courses.

Intrinsic Interest
I think the content of this class is enjoyable.

Anxiety
When I have problems learning the material in this course, I get anxious.

Achievement Goal Orientation

Mastery Approach
I like school work that I'll learn from even if I make a lot of mistakes.

Mastery Avoid
I'm concerned about the possibility of not completely mastering the material in this course.

Performance Approach
It is important for me to do better than any other student in this class.

Performance Avoid
It is important to me that I don't look stupid relative to the other students in this class.

Learning Strategies

Rehearsal
When studying in this course, I try to memorize my class notes as completely as possible.

Organization
When I study text materials in this course, I outline the material to help me organize my thoughts.

Elaboration
I try to relate ideas in this course to ideas in other subject areas whenever possible.

Metacognition
I ask myself questions to make sure I understand the material when I'm studying for this course.

Help Seeking Component Measures

Instrumental Help Seeking

- If I were having trouble understanding the material in this class I would ask someone who could help me understand the general ideas.
- Getting help would be one of the first things I would do if I were having trouble in this class.

Executive Help Seeking

- The purpose of asking somebody for help in this class would be to succeed without having to work as hard.
- Getting help in this class would be a way of avoiding doing some of the work.

Help Seeking Threat

- I would feel like a failure if I needed help in this class.
- I would not want anyone to find out that I needed help in this class.
- Getting help in this class would be an admission that I am just not smart enough to do the work on my own.

Help-Seeking Avoidance

- If I didn't understand something in this class I would guess rather than ask someone for assistance.
- Even if the work was too hard to do on my own, I wouldn't ask for help with this class.
- I would rather do worse on an assignment I couldn't finish than ask for help.

Formal vs. Informal Help Seeking

- If I were to seek help in this class I would ask the teacher rather than another student.
- I would prefer asking another student for help in this class rather than the instructor. (rev)
- In this class, the teacher would be better to get help from than would a student.